METHODS AND COMPOSITIONS FOR TREATING CONDITIONS OF THE CENTRAL AND PERIPHERAL NERVOUS SYSTEMS USING NON-SYNAPTIC MECHANISMS

Abstract of the Disclosure

The present invention relates to methods and compositions for treating selected conditions of the central and peripheral nervous systems employing non-synaptic mechanisms. More specifically, one aspect of the present invention relates to methods and materials for treating seizure and seizure disorders, epilepsy, status epilepticus, migraine, spreading depression, intracranial hypertension; for treating the pathophysiological effects of head trauma, stroke, ischemia and hypoxia; for treating or protecting from the pathophysiological effects of neurotoxic agents such as ethanol; and for treating neurophsyciatric disorders and central nervous system edema by administering agents that modulate ionic concentrations and/or ionic gradients in the brain, particularly ion-dependent or cation-chloride cotransporter antagonists. Electrolyte cotransport antagonists and combinations of such compositions with other agents for treating various conditions are disclosed. The present invention also relates to methods and compositions for treating pain by administering ion-dependent cotransporter antagonists. Methods and compositions for enhancing cortical function, for example, in centers of cognition, learning and memory, by administering ion-dependent cotransporter agonists are disclosed.